



Defined Benefit Plan

Actuary's Certification Letter



November 16, 1998

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Teachers' Retirement Board
California State Teachers' Retirement System

Dear Members of the Board:

The actuarial valuation report for the California State Teachers' Retirement System completed as of June 30, 1997, reveals that the Teacher Retirement System is an actuarially sound system based on current actuarial assumptions. We have determined that the projected income stream from the contributions mandated by the Education Code will be sufficient to pay the Normal Cost and to finance the Unfunded Actuarial Obligation over a period of three years.

Actuarial valuations are performed every two years. The previous valuation, as of June 30, 1995, indicated that the Unfunded Actuarial Obligation could be funded over a period of 18 years.

The valuation was based on financial and employee data received from the System and from the Report of Independent Accountants prepared by Coopers & Lybrand. Although we did not audit this data, we compared the data to that of prior years and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for purposes of our calculations.

Information presented in the following supporting tables included in this Actuarial Section of the 1998 Comprehensive Annual Financial Report are based on information found in our June 30, 1997 actuarial valuation report:

- Post-retirement mortality
- Probabilities of retirement
- Probabilities of withdrawal from active service
- Assumption for pay increases
- Economic assumptions
- Mortality assumptions
- Termination from disability
- Service retirement rates
- Disability rates
- Withdrawal rates
- Probability of refund
- Promotional salary increases
- Analysis of financial experience

Defined Benefit Plan Actuary's Certification Letter continued



In addition, data for the fiscal year ending June 30, 1997 presented in Schedule 1, and the summary of actuarial methods and assumptions in Schedule 2 of the Financial Section, are based on information found in our valuation report.

The valuation was based on the actuarial assumptions derived from the 1995 Experience Study of the System, and adopted by the Board that same year. In our opinion, these assumptions and the underlying actuarial cost method are reasonable and appropriate. Note that the results of future valuations will differ from these results to the extent that actual experience differs from that projected by the assumptions.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board of the American Academy of Actuaries. The results also comply with the requirements of the California statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. Both are Fellows of the Society of Actuaries, Enrolled Actuaries, and Members of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

In conclusion, the California State Teachers' Retirement System is an actuarially sound system based on current actuarial assumptions.

Respectfully submitted,

Sharon A. Bronzwaer, FSA, EA, MAAA
Consulting Actuary

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Consulting Actuary



Summary of Actuarial Assumptions and Methods

STRS, through its consulting actuary, performs an experience study every four years to determine appropriate demographic and economic assumptions. These assumptions are then applied every two years when the consulting actuary performs an actuarial valuation to monitor the funding status of the Defined Benefit Plan. The most recent experience study was completed as of June 30, 1995. The study was adopted by the Teachers' Retirement Board in April 1996. The most recent actuarial valuation was completed as of June 30, 1997, and adopted by the Teachers' Retirement Board in March 1998.

Following are the assumptions adopted by the Teachers' Retirement Board in April 1996.

- Investment return rate is 8.00 percent.
- Method used to value plan assets for actuarial valuation purposes: Expected actuarial value adjusted for 25 percent of the difference between actual market value and expected actuarial value.
- Current assumptions and methods were adopted by the Teachers' Retirement Board based on recommendations made by the consulting actuary in the 1991–95 experience study, which was completed as of June 30, 1995.
- Assumption for general wage increase because of inflation is 5.5 percent of which 4.5 percent is due to inflation and 1.0 percent is due to expected gains in productivity.

AGE	MALE	FEMALE
50	0.28%	0.15%
55	0.48	0.23
60	0.71	0.38
65	1.11	0.64
70	1.98	1.09
75	3.34	2.11
80	5.48	3.85
85	8.93	6.38
90	13.39	10.14
95	19.05	16.51
	1983 GAM (-3)	1983 GAM (-1)

Table #1: Post-retirement mortality table for sample ages

STATE TEACHERS' RETIREMENT SYSTEM

AGE	MALE	FEMALE
55	6.3%	6.8%
60	26.1	19.8
65	28.3	24.6
70	100.0	100.0

Table #2: Probabilities of retirement for sample ages

DURATION	ALL MALES	ENTRY AGES—FEMALE			
		27	32	37	42
1	14.8%	14.8%	14.8%	14.8%	14.8%
2	8.8	8.8	8.6	7.7	6.6
3	6.8	7.7	6.8	5.4	5.1
4	5.8	6.8	5.8	4.4	4.3
5	5.0	5.9	5.0	3.8	3.6
10	2.5	2.5	2.2	1.9	1.6
15	1.3	1.2	1.2	1.2	
20	0.8	0.9	0.9		
25	0.5	0.8			

Table #3: Probabilities of withdrawal from active service before age and service retirement for sample ages

- The actuarial cost method used by the plan is the entry age normal actuarial cost method, with actuarial gains and losses amortized over the remaining period required for the amortization of the unfunded actuarial obligation.
- The assumptions on this and the preceding page were adopted April 11, 1996, by the Teachers' Retirement Board.
- The extent to which benefits are expected to increase as a result of cost-of-living type adjustments is set in statute at a 2 percent simple increase provided annually beginning on September 1 following the first anniversary of the effective date of the allowance. Since 1971, this increase is applied to all eligible continuing allowances and is a provision of Part 13 of the Education Code, which governs the plan.

DURATION	ENTRY AGES			
	27	32	37	42
MALE				
1	8.0%	9.5%	9.8%	8.9%
10	3.6	2.6	1.9	2.0
20	1.1	0.7	0.7	0.4
30	0.7	0.6	0.7	0.4
FEMALE				
1	7.2	7.7	8.5	5.4
10	3.1	2.5	2.7	2.6
20	0.7	0.6	0.9	1.0
30	0.3	0.4	0.5	0.6

Table #4: Assumption for pay increases due to promotions and longevity for sample ages (exclusive of the assumed general wage increase, which includes inflation)



- The last study of the plan's actual experience was completed by the consulting actuary on March 25, 1996 (as of June 30, 1995) and adopted by the Teachers' Retirement Board April 11, 1996. All assumptions used in the subsequent actuarial valuation were provided by that experience study. The most recent actuarial valuation of the plan was completed February 26, 1998 (as of June 30, 1997) and adopted by the Teachers' Retirement Board March 5, 1998.

Actuarial assumptions—The economic and demographic actuarial assumptions for this plan have not changed since the last experience study or valuation was completed. The following assumptions were used to complete the last two valuations for this plan.

Because the economic assumptions were not changed for the most recent actuarial valuation, as of June 30, 1997, there was no net change to the unfunded actuarial obligation based on these assumptions.

Discussion of recent changes in:

The nature of the plan—The nature of this plan has not materially changed since the last experience study or valuation was completed.

Consumer Price Inflation	4.50%
Investment Yield	8.00%
Wage Inflation	5.50%
Interest on Member Accounts	6.00%
Growth in Active Membership	0.00%
Administrative Expenses	0.25%*

Table #5: Economic assumptions

**Percent of payroll*

STATE TEACHERS' RETIREMENT SYSTEM

Retired Members	–Male –Female	1983 GAM-M(-3) 1983 GAM-F(-1)
Active Members	–Male –Female	1983 GAM-M(-5) 1983 GAM-F(-3)
Beneficiaries	–Male –Female	1983 GAM-M(-3) 1983 GAM-F(-1)
Pre-1972 Disabilities	–Male –Female	1951 GAM-M(-1) 1951 GAM-F(-8)

Table #6: Mortality assumptions

Male	1983 GAM-M (Minimum 3.5%)
Female	1983 GAM-F (Minimum 2.2%)

Table #7: Termination from disability

MALE	
55	6.3%
60	26.1%
65	28.3%
70	100.0%
Number	11,015
FEMALE	
55	6.8%
60	19.8%
65	24.6%
70	100.0%
Number	15,330

Table #8: Service retirement (sample ages)

Number of Disabilities			
Coverage A		–Female	
–Male	283	32	0.03%
–Female	555	42	0.10
Coverage B		52	0.26
–Male	239	62	0.41
–Female	560	Entry age 42	
		–Male	
		52	0.40%
		57	0.50
		62	0.70
		–Female	
		52	0.40%
		57	0.50
		62	0.70
		Entry age 47 & Over	
		–Male	
		52	0.65%
		57	0.95
		62	1.25
		–Female	
		52	0.50%
		57	0.70
		62	1.10

Table #9: Disability



Total Number of Terminations–

- Male	10,824
- Female	26,595

Rates of Termination by Sample Durations of Membership and Sample Entry Ages–

DURATION	27	SAMPLE ENTRY AGES		
		32	37	42
MALE				
1	14.8%	14.8%	14.8%	14.8%
2	8.8	8.8	8.8	8.8
3	6.8	6.8	6.8	6.8
4	5.8	5.8	5.8	5.8
5	5.0	5.0	5.0	5.0
10	2.5	2.5	2.5	2.5
15	1.3	1.3	1.3	
20	0.8	0.8		
25	0.5			
FEMALE				
1	14.8%	14.8%	14.8%	14.8%
2	8.8	8.6	7.7	6.6
3	7.7	6.8	5.4	5.1
4	6.8	5.8	4.4	4.3
5	5.9	5.0	3.8	3.6
10	2.5	2.2	1.9	1.6
15	1.2	1.2	1.2	
20	0.9	0.9		
25	0.8			

Probability of Refund by Sample Durations of Membership and Sample Entry Ages–

DURATION	27	SAMPLE ENTRY AGES		
		32	37	42
MALE				
Under 5	100%	100%	100%	100%
10	60	50	50	45
15	50	45	45	
20	40	40		
25	30			
FEMALE				
Under 5	100%	100%	100%	100%
10	40	40	40	35
15	35	35	35	
20	30	25		
25	20			

Table #10: Withdrawal all terminations

Future service credits are determined by using individual records and projecting future service credits for each member based on that member's actual service credit earned in the prior year.

DURATION	SAMPLE ENTRY AGES			
	27	32	37	42
MALE				
1	8.0%	9.5%	9.8%	8.9%
10	3.6	2.6	1.9	2.0
20	1.1	0.7	0.7	0.4
30	0.7	0.6	0.7	0.4
FEMALE				
1	7.2	7.7	8.5	5.4
10	3.1	2.5	2.7	2.6
20	0.7	0.6	0.9	1.0
30	0.3	0.4	0.5	0.6

Table #11: Promotional salary increases

(assumption for salaries due to promotions and longevity, exclusive of the assumed general wage increase)

Because the demographic assumptions were not changed for the most recent actuarial valuation, as of June 30, 1997, there was no net change to the unfunded actuarial obligation based on those assumptions.

Actuarial methods

Actuarial Cost Method	Entry age normal actuarial cost method
Asset Valuation Method	Expected value with 25 percent adjustment to market value

Because the actuarial methods were not changed for the most recent actuarial valuation, as of June 30, 1997, there was no net change to the unfunded actuarial obligation based on these assumptions.



STRS contracts for all actuarial services. The current contractor, Watson Wyatt & Company, has been the system's actuary since October 1, 1997. This firm completed its first actuarial valuation for the plan as of June 30, 1997. In that actuarial valuation, the actuary's methods resulted in an estimated net decrease in the unfunded actuarial obligation of \$1.075 billion. This decrease is due to the explicit valuation of certain liabilities that had been estimated by the prior actuary.

There are no other specific assumptions that have a material impact on valuation results for this plan.

The data displayed in Table 12 is as of June 30 of the specified year. Other information, specifically annual payroll amounts, reported in the financial section of this report will generally not be consistent. The reason for this is that the financial data reflects payroll for all individuals who were active during the year, while Table 12 only includes those individuals who are active as of June 30. It does not include those individuals who were active at some point during the year but not as of June 30.

Amounts provided in Table 13 represent the status of the population as of June 30 of the indicated year. The information provided in the Removed From Rolls and Rolls End of Year columns include the application of the annual post-retirement 2 percent simple cost-of-living adjustment.

Date (As of 6-30)	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
1993	313,617	\$11,712,337,653	\$37,346	-.5%
1994	319,176	11,978,064,140	37,528	.5
1995	327,513	12,411,264,262	37,895	1.0
1996	336,725	12,994,673,531	38,591	1.8
1997	364,000	14,371,068,403	39,481	2.3
1998	385,530	15,725,658,541	40,790	3.3

Table #12: Schedule of active member valuation data

Added to Rolls			Removed from Rolls		Rolls--End of Year			
Date (as of June 30)	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
1993	8,155	\$196,511	3,779	\$41,142	136,987	\$2,074,643	10.4%	\$15,145
1994	7,787	186,556	4,395	48,919	141,873	2,256,581	8.8	15,906
1995	7,863	185,022	4,351	51,817	146,805	2,438,513	8.1	16,611
1996	7,737	186,916	4,642	55,635	150,805	2,621,422	7.5	17,383
1997	6,672	163,744	4,717	59,864	153,639	2,781,406	6.1	18,104
1998	7,807	204,201	4,725	63,424	154,531	2,953,913	6.2	19,115

Table #13: Schedule of retired members and beneficiaries added to and removed from rolls (\$ thousands)

The data provided for each year-end in Table 13 is a snapshot of the population taken following year-end closing for the indicated period. It is likely adjustments will be made subsequent to this closing. No attempt is made to update the data in Table 13 for these adjustments.

Because of the potential for post-closing adjustments that are not updated in Table 13, and for post-retirement adjustments that are included in the individual accounts rather than separately maintained, any update of a prior end of year total using additions and deletions from the next year most likely will not equal the total provided for the next year.

An experience analysis was performed for STRS in 1991 and again in 1995. As a result of the performance of these studies, minor changes were made to the actuarial assumptions and to the funding methods. No significant plan changes have taken place during the period of time depicted in Table 14.

The most recent actuarial valuation of the system (as of June 30, 1997) projects the current level percent of payroll financing

provided in statute will amortize the unfunded actuarial obligation over a period of three years. The prior actuarial valuation (as of June 30, 1995) stated amortization of the unfunded actuarial obligation would occur at 18 years. Theoretically, the June 30, 1997 actuarial valuation should have shown a remaining amortization period of 16 years. The significant reduction of this amortization period to three years is mainly the result of favorable investment returns (\$3.239 billion) over the period since the prior actuarial valuation was performed. Other contributing factors were (1) liability gains associated with actual experience not meeting assumptions (\$1.692 billion), (2) methodology changes directly associated with the new actuarial firm (\$1.075 billion) and (3) actual contributions that were different than were assumed (\$0.354 billion).

Actuarial valuations are performed every two years to analyze the sufficiency of the statutory contributions to meet the current and future obligations of the plan. By using the actuarial methods and assumptions adopted by the Teachers' Retirement Board, the actuarial valuation provides the best estimate of the plan's long-term financing.

Aggregate Accrued Liabilities For							
*Valuation Date (as of 6-30)	(1) Active Member Contributions On Deposit	(2) Future Benefits to Benefit Recipients	(3) Service Already Rendered by Active Members	Actuarial Value of Assets	(1)	(2)	(3)
1991	\$10,998	\$16,984	\$19,118	\$36,001	100.0%	100.0%	41.9%
1993	12,831	20,930	19,820	45,212	100.0%	100.0%	57.8%
1995	14,478	25,416	23,497	55,207	100.0%	100.0%	65.2%
1997	18,451	29,127	22,274	67,980	100.0%	100.0%	91.6%

Table #14: Solvency test (\$ millions)

* No actuarial report is prepared in even-numbered years.

No estimation using actuarial methodology is made in years between valuations.



Comparing the unfunded actuarial obligation as of two valuation dates does not provide enough information to determine if there were actuarial gains or losses. The correct comparison is between the unfunded actuarial obligation on the valuation date and the expected unfunded actuarial obligation projected from the prior valuation date using the actuarial assumptions in effect for the two-year period.

Table 15 shows the unfunded actuarial obligation and the elements to project that figure forward two years: the normal cost, less contributions assumed to be collected, plus a charge for interest at the assumed rate.

Actuarial gains reduce the unfunded actuarial obligation as of the valuation date, and actuarial losses increase the unfunded actuarial obligation. Most actuarial gains and losses are a result of short-term fluctuations in experience or changes in actuarial assumptions. Because of the long-term nature of

actuarial assumptions, future patterns of emerging experience may offset these short-term fluctuations.

Independent actuarial review

Actuarial services for the State Teachers' Retirement System are provided, under contract, by a qualified independent actuarial firm. STRS does not retain an actuary on-staff.

The work performed for STRS by the independent actuarial firm is subject to periodic audit by the Bureau of State Audits. Also, through the competitive acquisition process, the work of a prior actuary will be verified in a subsequent actuarial valuation performed by a new contract actuary. Should the same actuarial firm continue for a period of 10 years, provisions are made for an independent review of that firm's work through an actuarial audit completed by another firm. These audit services are acquired using the competitive acquisition process.

<i>Gains and Losses in Unfunded Actuarial Obligation Resulting from Differences Between Assumed and Actual Experience (\$Millions)</i>	Actuarial Valuation as of June 30:	
	1997	1995
Unfunded Actuarial Obligation at June 30:	\$8.184 (1995)	\$8.369 (1993)
Expected Increases & Decreases		
Normal Cost	4.313	4.332
Expected contributions	(5.529)	(5.231)
Interest	1.264	1.406
Expected net Increases & Decreases	\$ 0.048	\$ 0.507
Expected Unfunded Actuarial Obligation at June 30:	\$8.232 (1997)	\$8.876 (1995)
Actuarial Gains & (Losses)		
Change in Methods	1.075	2.178
Change in Economic Assumptions	0	(0.969)
Change in Demographic Assumptions	0	(2.201)
Investment Return Assumption	3.239	0.828
Wage Increase Assumption	0	0
Contribution Assumption	0.354	0.474
Net Change Other Sources	1.692	0.382
Net Actuarial (Gains) & Losses	\$ (6.360)	\$ 0.692
Unfunded Actuarial Obligation at June 30:	\$ 1.872 (1997)	\$ 8.184 (1995)

Table #15: Analysis of financial experience

Past actuarial work performed for STRS has been found to be in compliance with actuarial standards of practice, and to be of the highest quality.

The current actuarial consultant replaced the prior consultant on October 1, 1997 as a result of the competitive acquisition process. The first major task of the new consultant was to complete the actuarial valuation as of June 30, 1997. To accomplish this required the new consultant to first recreate the result of the prior actuarial valuation as of June 30, 1995 to establish a baseline. Recreating the prior result provided an audit of that result and allowed the opportunity for the new consultant to ensure it understood the provisions of the plan and agreed with the in-place assumptions for the actuarial valuation to be completed. The result of this effort validated the previous actuarial valuation.

Summary of Defined Benefit Plan Provisions

Service Retirement

Eligibility

Age 60 with five years of credited California service.

Benefit Formula

Two percent of final compensation for each year of credited service at age 60. (Final compensation is the average salary earnable for the highest three consecutive years of credited California service.)

Exceptions:

- 1) For an eligible classroom teacher who retires after June 30, 1990, final compensation may be the highest annual compensation earnable during any period of 12

consecutive months while a member of the plan. This provision only applies to a qualified classroom teacher, as defined, who is employed by an employer who has entered into a written agreement with the exclusive employee representative to make this provision applicable.

- 2) Effective January 1, 1994, final compensation may be the highest average annual compensation earnable during ANY three "non-consecutive" years (one year is a period of 12 consecutive months) of membership in the plan. This alternative is available ONLY to a member whose salary has been reduced because of a reduction in school funds.

Internal Revenue Code Section 415

Benefits are subject to limits imposed under Internal Revenue Code Section 415.

Exception: Benefits based upon plan provisions in effect as of October 14, 1987, which are payable to members with membership effective dates prior to January 1, 1990, are not subject to IRC Section 415 limits.

Early Retirement

Eligibility

Age 55 with five years credited California service. A 1/2 percent reduction is made in the normal retirement allowance for each full month or partial month the member is younger than age 60.

30 and Out

Age 50 with 30 years of credited California service. The standard (1/2 percent) early retirement reduction is applied from 60 to age 55 and a 1/4 percent reduction is made for each full or partial month the member is younger than age 55.



Limited-Term Reduction

Age 55 and under age 60 with five years of credited California service. Under this alternative, a reduced allowance is paid that will equal 1/2 the normal retirement allowance at age 60. The reduced allowance continues until the amount paid after age 60 equals the amount paid prior to age 60. Thereafter, the normal retirement allowance would be paid.

Two Years Additional Service Credit Golden Handshake

For members who qualify for retirement, there is a special program which provides for an additional two years of service credit if authorized and funded by individual employers. This program was effective through December 31, 1993, then resumed on March 15, 1994, with modifications and remains in effect through December 31, 1998.

Retirement After Normal Retirement Age

Members continue to earn additional service credit after age 60, but there is no increase in the 2 percent benefit factor.

Deferred Retirement

Any time after satisfying the minimum service requirement, a member may cease active service, leave the accumulated retirement contributions on deposit, and later retire upon attaining the minimum age requirement and filing an application to retire. No formal election is required to defer retirement; however, a formal application must be made to the system in order to retire.

Mandatory Retirement

The plan does NOT have any mandatory retirement provisions. However, federal law requires that a minimum distribution of retirement benefits begins no later than April 1 of the calendar year following the calendar year

in which a member reaches age 70-1/2 if the member has not retired and is no longer performing creditable service subject to coverage by the plan or is no longer employed in a position requiring or permitting membership in another California public retirement system. STRS established a program under Teachers' Retirement Law provisions to meet the federal minimum distribution requirements.

Sick Leave Service Credit

Service credit is granted for unused sick leave at the time of retirement. New members on and after July 1, 1980, or any members who refund and return to membership on or after July 1, 1980, will not receive credit for sick leave. Retired members who reinstate on or after July 1, 1980, will not receive service credit at a subsequent retirement for unused sick leave accrued after reinstatement.

Pre-Retirement Election of an Option

Any member who is eligible for service retirement may make a pre-retirement election to receive a modified joint and survivor allowance payable at retirement in place of the unmodified allowance. If the member dies prior to retirement, the option beneficiary will receive a lifetime allowance based on the option selected. This election is available for those members who, at age 55, do not wish to retire, but want to ensure a monthly lifetime income to a beneficiary in the event death occurs prior to retirement. However, the pre-retirement election makes the member ineligible for a family or survivor benefit allowance unless the election is canceled prior to death. (The options are defined in the Plan Summary Definitions Section).

Post-Retirement Adjustment

Benefit Improvement Factor

There is a 2 percent simple increase on each September 1 following the first anniversary of the effective date of the allowance (the date on which the monthly allowance began to accrue). The annual 2 percent increase is applied to ALL continuing allowances.

Supplemental Increase

Revenue from the State General Fund and School Lands restored purchasing power to a minimum of 75 percent of a benefit recipient's initial allowance beginning January 1, 1998. These supplemental payments are not vested, and are subject to availability of funding.

Post-Retirement Earnings Limitation

STRS has no limitation on earnings outside the California public school system. There is a fiscal year limitation on earnings from creditable service within the California public school system. The allowance of a member retired for service will be reduced by the amount of any earnings in excess of the limitation, up to a member's annual allowance amount. Effective July 1, 1997, the limit was increased to \$18,300. The initial earnings limitation of \$15,000 is increased each July 1 by 100 percent of the annual increase in the All Urban California Consumer Price Index, using December 1989 as the base.

Disability Allowance—Coverage A

Eligibility

Age Limit: Under age 60.

Service Credit: Minimum of five years.

Employment Status: May apply for disability allowance while still employed.

Benefit Formula

Allowance

Fifty percent of final compensation

or

Five percent of final compensation for each year of service credit if over age 45 with less than 10 years of service credit.

plus

Children's Benefits

Ten percent of final compensation for each eligible dependent child, up to a maximum of 40 percent of final compensation. The increment for each eligible child continues until the child attains age 22.

Pre-Retirement Election of an Option

Any member receiving a disability allowance who is eligible to retire may make a pre-retirement election to receive a modified joint and survivor allowance payable at retirement in place of the unmodified allowance. If the member dies prior to retirement, the option beneficiary will receive a lifetime allowance based on the option selected. The pre-retirement election makes the member's survivor ineligible for the family allowance unless the election is canceled prior to the member's death.

Offsets

Allowance, including children's increments, will be reduced by an amount equal to any benefits payable for the same disability under other public systems.

Employment

May be employed in a position to perform creditable service subject to coverage by the plan, or any other employment, subject to limitations.



Earnings Limit

In a single month, the disability allowance (less amounts payable for children) plus employment earnings may not exceed 100 percent of indexed final compensation.

or

For a six-month period, average earnings may not exceed 66-2/3 percent of indexed final compensation.

Conversion To Service Retirement

Allowance is payable for duration of disability or until conversion to a service retirement allowance at normal retirement age. A member's allowance is based on the projected final compensation and projected service to normal retirement age; however, the service retirement allowance may not exceed the terminated disability allowance.

Death Benefit

A \$5,227 lump-sum death payment is payable to the designated beneficiary upon the death of the disabled member. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

plus

If the member has not elected a pre-retirement option, a family allowance is payable to the surviving spouse who has children eligible for a children's benefit.

or

If there are no eligible children, the spouse may elect to take a lump-sum refund of the contributions and interest remaining in the member's account or receive an Option 3 beneficiary allowance at age 60, or immediately with a reduction based on the member's and spouse's ages at the time the benefit begins.

Disability Retirement — Coverage B

Eligibility

Age Limit: None.

Service Credit: Minimum of five years.

Employment Status: May apply for disability retirement while still employed.

Benefit Formula

Allowance

Fifty percent of final compensation regardless of age and service credit.

plus

Children's Benefits

Ten percent of final compensation for each eligible dependent child, up to a maximum of 40 percent of final compensation. The increment for each eligible child continues until the child attains age 21, regardless of student, marital or employment status.

Option Election

May elect a joint and survivor option upon application for a disability retirement.

Offsets

Allowance (less amounts payable for children) will be reduced by an amount equal to any benefit payable for the same disability under a Workers' Compensation program.

Employment

May be employed to perform creditable service or any other employment but can not make contributions to the Teachers' Retirement Fund or accrue service credit based on earnings from any employment.

Earnings Limit

There is a calendar year limitation on earnings from all employment. The allowance of a member retired for disability will be reduced by the amount of any earnings in excess of the limitation. Effective July 1, 1997, the limit was increased to \$18,300. The initial earnings limitation of \$15,000 is adjusted each July 1 by 100 percent of the annual increase in the All Urban California Consumer Price Index, using December 1989 as the base.

Conversion to Service Retirement

No conversion; allowance is payable for the duration of the disability.

Death Benefit

A \$5,227 lump-sum death payment is payable to the designated beneficiary upon the death of the disabled member. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

plus

If an option was selected at the time of disability retirement, a lifetime allowance is payable to the option beneficiary.

or

If no option was selected, a lump-sum refund of any remaining contributions and interest in the member's account is payable to the eligible beneficiary.

Family Allowance—Coverage A Eligibility

Status: Member was actively employed or receiving a disability allowance at the time of death and had not elected a pre-retirement election of an option.

Service Credit: One or more years.

Lump-Sum Death Payment

A \$5,227 lump-sum death payment is payable to the designated beneficiary upon the death of the member. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

Basic Benefit

When there are eligible children, a family allowance will be paid. If there are no eligible children, the spouse may elect to receive an Option 3 beneficiary allowance at age 60 or immediately with a reduction based on the member's and spouse's ages at the time the benefit begins or take a lump-sum refund of the remaining contributions and interest in the member's account.

Surviving Spouse

Eligibility

Married to the member for at least one year on the date of death.

Allowance

The surviving spouse with eligible children would receive 40 percent of the member's final compensation for as long as there is at least one eligible child.

An additional 10 percent of final compensation is payable for each eligible child, up to a maximum benefit of 50 percent for the children's increment.

To be eligible, dependent children must be unmarried and under age 22.

When there are no eligible children, the spouse may elect to receive an Option 3 beneficiary allowance or take a lump-sum refund of the remaining contributions and interest in the member's account.



If there is no surviving spouse, an allowance of 10 percent of the member's final compensation is payable to each eligible child up to a maximum of 50 percent of final compensation.

If there is neither a surviving spouse nor a dependent child, the member's dependent parents may elect to receive an Option 3 beneficiary allowance at age 60 or over, or take a lump-sum refund of the remaining contributions and interest in the member's account.

Contributions and Interest

If there is no surviving spouse, eligible children, or dependent parent, the contributions and interest are paid to the designated beneficiary.

Death Benefit for Retired Members

Designated beneficiaries of STRS retired members receive a \$5,227 lump-sum death payment. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

Survivor Benefits—Coverage B Eligibility

Status: Member was actively employed at the time of death and had not elected a pre-retirement election of an option.

Service Credit: One or more years.

Lump-Sum Death Payment

A \$20,908 lump-sum death payment is payable to the designated beneficiary if the member had one or more years of credited service. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

Basic Benefit

The surviving spouse may elect to receive a monthly allowance or take a lump-sum of the contributions and interest in the member's account.

Surviving Spouse

Eligibility

Married to the member for at least one year on the date of death.

Allowance

If the surviving spouse elects not to take a lump-sum refund of the contributions and interest in the member's account, the surviving spouse would receive one half of the member's Option 3 allowance, beginning on the member's 60th birthday, or immediately with a reduction based on the member's and spouse's age at the time the benefit begins. There is no dependent child requirement.

If the surviving spouse elects a monthly allowance, each eligible dependent child would receive 10 percent of the member's final compensation with a maximum benefit of 50 percent. The benefit is dependent upon the spouse electing a monthly allowance.

To be eligible, dependent children must be under age 21. Student, marital or employment status will not terminate the benefit.

If there is no surviving spouse, no children's benefits are payable.

Contributions and Interest

If there is no surviving spouse, the contributions and interest are paid to the member's designated beneficiary.

Death Benefit for Retired Members

Designated beneficiaries of STRS retired members receive a \$5,227 lump-sum death payment. The amount of the death payment may be adjusted by the Teachers' Retirement Board following each actuarial valuation based on changes to the All Urban California Consumer Price Index.

Social Security

The plan is not integrated with, coordinated with, or supplemented by the federal Social Security Program.

Termination of Membership

After termination of employment, a member may request a refund of contributions and interest as credited to the member's account to date of withdrawal.

A refund terminates membership in and all rights to future benefits from the plan.

Re-Entry into Plan After Refund

Individuals who have received a refund, and who subsequently become members of the plan, may redeposit all contributions and interest previously refunded. In addition, regular interest from the date of the refund through final date of payment must be paid in order to be credited with the related service. The member must, however, earn at least one year of credited service after re-entry before becoming eligible for any benefits from the plan.

Funding

Teachers Contribution:

Eight percent of salary.

Employers Contribution:

Eight percent of the total of the salaries on which the members contributions are based

plus

0.25 percent of salary to pay costs related to unused sick leave service credit (effective July 1, 1986).

plus

0.307 percent of salary covers the cost of ad hoc benefit adjustments (effective January 1, 1980).

State Contribution:

The state's quarterly contribution to STRS, commencing October 1, 1991, is set at 1.075 percent of the total of the salaries of the prior calendar year upon which members' contributions are based. This rate will continue until the unfunded obligation is eliminated and then will be reduced to the amount required to cover the normal cost of the benefits in effect on July 1, 1990.

Summary Definitions

Beneficiary

Any person or entity entitled to receive payments because of the death of a member. Only a person (not an estate, trust, or corporation) may be designated to receive a joint and survivor allowance upon the death of the member.

California Service

Service performed in California for which service credit may be given.

Coverage A

Coverage A refers to the disability allowance and family allowance programs that existed prior to October 16, 1992. Coverage under these programs is mandatory for all members of the plan who were receiving a disability allowance or a service retirement allowance with a benefit effective date prior to October 16, 1992. Members who were not receiving a benefit on October 16, 1992, could elect to retain this coverage.



Coverage B

Coverage B refers to the disability retirement and survivor benefits programs that were enacted on October 16, 1992. Coverage is mandatory for all new members and was elective for members who were not receiving a benefit and had membership effective dates prior to October 16, 1992.

Credited Service

Service credit for which required contributions have been paid.

Creditable Service

Specific activities performed for an employer in a position requiring a credential, certificate, or permit, or under the appropriate minimum standards adopted by the Board of Governors of the California Community Colleges, or under the provisions of an approved charter for the operation of a charter school for which the employer is eligible to receive state apportionment.

Disability or Disabled

Any medically determinable physical or mental impairment which is permanent or which can be expected to last continuously for at least 12 months. The disability must prevent a member from performing the member's usual duties with reasonable modifications or the duties of a comparable level for which the member is qualified or can become qualified by education, training or experience. A member may apply for disability while still employed. Any impairment from a willful self-inflicted injury shall not constitute a disability.

Disabled Member

A member to whom a disability allowance is payable.

Eligible Child

Coverage A

A member's unmarried offspring, adopted child or stepchild up to age 22 who is dependent upon the member on the effective date of the disability allowance or the date of the member's death.

Coverage B

A member's offspring, adopted child or stepchild, regardless of marital or student status up to 21 years of age, if dependent on the member on the effective date of disability retirement or the date of the member's death.

Indexed Final Compensation

The final compensation increased to reflect the change in the average salary increase of all active members of the plan. The member's base disability allowance or disability retirement plus employment earnings is compared to the indexed final compensation to determine if the member's earnings have exceeded either the single month or six-month earnings limit.

Joint and Survivor Options

Option 2

Joint and 100 percent to beneficiary: Upon the retired member's death the modified allowance will continue to be paid to the option beneficiary for life.

Option 3

Joint and 50 percent to beneficiary: Upon the retired member's death, one-half of the modified allowance will continue to be paid to the option beneficiary for life.

Option 4

Joint and 66-2/3 percent to survivor: Upon the death of either the retired member or the option beneficiary, two-thirds of the modified allowance will continue to be paid to the survivor for life.

Option 5

Joint and 50 percent to survivor: Upon the death of either the retired member or the option beneficiary, one-half of the modified allowance will continue to be paid to the survivor for life.

Option 6

Joint and 100 percent to beneficiary with "pop up:" Upon the retired member's death, the modified allowance will continue to be paid to the option beneficiary for life. If the option beneficiary predeceases the retired member, the retired member's allowance will rise or "pop up" to the unmodified level.

Option 7

Joint and 50 percent to beneficiary with "pop up:" Upon the retired member's death, one-half of the modified allowance will continue to be paid to the option beneficiary for life. If the option beneficiary predeceases the retired member, the retired member's allowance will rise or "pop up" to the unmodified level.

Member

Any person who has performed creditable service for an employer and has earned compensation for that service and has not received a refund for that service, unless specifically excluded by law.

Active Member:

A member who earns compensation during the school year.

Inactive Member:

A member who, by the pay period ending June 30, has not earned compensation during the school year.

Disabled Member:

A member to whom a disability allowance is payable.

Retired Member:

A member who has terminated employment and has retired for service or has retired for disability and to whom a retirement allowance is payable.

Parent

A natural parent or a parent who adopted the member prior to the member's attainment of 18 years of age or marriage, whichever occurs earlier.

Projected Final Compensation

The final compensation used to determine the disability or family allowance benefit increased by 2 percent compounded annually to June 30th prior to age 60. To compute a family allowance based on the death of a member who was receiving a disability allowance, compensation is projected through the June 30th prior to the member's death.

Projected Service

Credited service plus the service that would have been earned to age 60 (or termination of the disability allowance, whichever comes first) had the member continued to work and receive credit at the same rate as the highest of any one of three school years immediately preceding the effective date of disability or the date of the member's death.

Retired Member

A member who has terminated employment and has retired for service or has retired for disability and to whom a retirement allowance is payable.



Return of Member Contributions

A one-time payment of all accumulated member contributions in excess of the monthly allowances already paid. Payment equals the member's total accumulated contributions and interest at time of retirement, disability or death less the sum of all monthly allowance payments received. The refund is payable when there are no longer any beneficiaries or survivors who qualify for a continuing monthly allowance from the plan.

Surviving Spouse

A person who was married to the member for at least 12 months prior to the member's death. May be married less than 12 months if a child was born during the marriage or if the surviving spouse is carrying the member's unborn child.

Changes in Plan Provisions

There have been no plan amendments which would impact an actuarial valuation of STRS since the last annual financial report was issued. All plan provisions were considered in the completion of the June 30, 1997 actuarial valuation.

Cash Balance Plan

Actuary's Certification Letter



November 16, 1998

Watson Wyatt & Company

Suite 700
15303 Ventura Boulevard
Sherman Oaks, CA 91403-3197
Telephone 818 906 2631
Fax 818 906 2097

Teachers' Retirement Board
California State Teachers' Retirement System

Dear Members of the Board:

We have performed an actuarial valuation of the California State Teachers' Retirement System Cash Balance Plan as of June 30, 1997. The primary purpose of the valuation is to determine the adequacy of the current contribution rates through the measurement of the Gain and Loss Reserve, to describe the current financial condition of the Plan, and to analyze changes in the Plan's condition.

The Gain and Loss Reserve and the Unfunded Actuarial Accrued Liability illustrate the progress toward the realization of financing objectives. Based on the actuarial valuation as of June 30, 1997, the Plan has an Unfunded Actuarial Accrued Liability of \$557,078. Plan participation and the related asset base has not been sufficient to fund initial and ongoing administrative expenses. This situation is expected to continue into the near future, until participation levels increase. (Subsequent to the completion of the valuation, legislation has passed which will eliminate the Unfunded Actuarial Accrued Liability for this Plan.)

Actuarial valuations for this plan are performed annually. This valuation as of June 30, 1997 is the first valuation for this plan.

Information presented in the following supporting tables included in this Actuarial Section of the 1998 Comprehensive Annual Financial Report are based on information found in our June 30, 1997 actuarial valuation report:

- Post retirement mortality
- Probabilities of retirement
- Probabilities of withdrawal from active service
- Assumption for pay increases
- Economic assumptions
- Mortality assumptions
- Termination from disability
- Service retirement rates
- Disability rates
- Withdrawal rates
- Probability of refund
- Promotional salary increases
- Analysis of financial experience



Cash Balance Plan Actuary's Certification Letter continued



In addition, data for the fiscal year ending June 30, 1997 presented in Schedule 1, and the summary of actuarial methods and assumptions in Schedule 2 of the Financial Section, are based on information found in our valuation report.

The valuation was based on financial and employee data received from the System. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and determined it sufficiently accurate for purposes of our calculations.

Actuarial methods and assumptions have been selected by the Teachers' Retirement Board. The Board has sole authority to determine the actuarial assumptions used for the Plan. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation, and are internally consistent and reflect reasonable expectations. Note that the results of future valuations will differ from the June 30, 1997 results to the extent that actual experience differs from that projected by the assumptions.

All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board of the American Academy of Actuaries. The results also comply with the requirements of the California statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. Both are Fellows of the Society of Actuaries, Enrolled Actuaries, and Members of the American Academy of Actuaries, and both are experienced in performing valuations for large public retirement systems.

Respectfully submitted,

Sharon A. Bronzwaer, FSA, EA, MAAA
Consulting Actuary

W. Michael Carter, FSA, EA, MAAA
Consulting Actuary

Summary of Actuarial Assumptions and Methods

STRS, through its consulting actuary, will perform an experience study at least every four years to determine appropriate demographic and economic assumptions. These assumptions are then applied every year when the consulting actuary performs an actuarial valuation to monitor the funding status of the Cash Balance Plan. The most recent actuarial valuation was completed as of June 30, 1997, and adopted by the Teachers' Retirement Board in March 1998.

The Cash Balance Plan was established July 1, 1996 and, therefore, has not yet existed for a sufficient period of time to allow completion of the first experience study. For this reason, it was necessary for the actuary to provide recommended economic and demographic assumptions that were based on those used by the Defined Benefit Plan and the actuary's best judgement based on the actuary's experience with similar plans. These recommendations were adopted by the

Teachers' Retirement Board on November 6, 1997, and were used to complete the first actuarial valuation which was completed as of June 30, 1997. Following are the assumptions adopted by the Teachers' Retirement Board for this plan.

- Investment return rate is 7.00 percent.
- Method used to value plan assets for actuarial valuation purposes: The actuarial value of assets is equal to the net assets available for benefits. This is the same as market value of assets less payables as reflected in the financial statements.
- Current assumptions and methods were adopted by the Teachers' Retirement Board based on recommendations made by the consulting actuary. Assumptions for this plan were adopted by the board on November 6, 1997.
- Assumption for general wage increase because of inflation is 5.5 percent, of which 4.5 percent is due to inflation and 1.0 percent is due to expected gains in productivity.

AGE	MALE	FEMALE
50	0.28%	0.15%
55	0.48	0.23
60	0.71	0.38
65	1.11	0.64
70	1.98	1.09
75	3.34	2.11
80	5.48	3.85
85	8.93	6.38
90	13.39	10.14
95	19.05	16.51
	1983 GAM (-3)	1983 GAM (-1)

Table #1: Post-retirement mortality table for sample ages



AGE	MALE	FEMALE
55	6.3%	6.8%
60	26.1	19.8
65	28.3	24.6
70	100.0	100.0

Table #2: Probabilities of retirement for sample ages

DURATION	ALL MALES	ENTRY AGES—FEMALE			
		27	32	37	42
1	14.8%	14.8%	14.8%	14.8%	14.8%
2	8.8	8.8	8.6	7.7	6.6
3	6.8	7.7	6.8	5.4	5.1
4	5.8	6.8	5.8	4.4	4.3
5	5.0	5.9	5.0	3.8	3.6
10	2.5	2.5	2.2	1.9	1.6
15	1.3	1.2	1.2	1.2	
20	0.8	0.9	0.9		
25	0.5	0.8			

Table #3: Probabilities of withdrawal from active service before age and service retirement for sample ages (Assumption for the CB Plan is 125% of the rates shown in this table.)

- The actuarial cost method used by the plan is the traditional unit credit cost method.
- The Cash Balance Plan does not provide cost-of-living adjustments for benefit recipients.
- The assumptions on this and the preceding page were adopted November 6, 1997, by the Teachers' Retirement Board.
- Because this is a relatively new plan, sufficient information is not yet available to allow a study of the plan's actual experience. Initial experience for this plan was developed using the experience of the Defined Benefit Plan and the judgment and expertise of the qualified consulting actuary.

DURATION	ENTRY AGES			
	27	32	37	42
MALE				
1	8.0%	9.5%	9.8%	8.9%
10	3.6	2.6	1.9	2.0
20	1.1	0.7	0.7	0.4
30	0.7	0.6	0.7	0.4
FEMALE				
1	7.2	7.7	8.5	5.4
10	3.1	2.5	2.7	2.6
20	0.7	0.6	0.9	1.0
30	0.3	0.4	0.5	0.6

Table #4: Assumption for pay increases due to promotions and longevity for sample ages (exclusive of the assumed general wage increase, which includes inflation)

The assumptions recommended by the actuary were adopted by the Teachers' Retirement Board November 6, 1997. All assumptions used in the subsequent actuarial valuation were provided as described. The only actuarial valuation for this plan was completed February 26, 1998 (as of June 30, 1997) and adopted by the Teachers' Retirement Board March 5, 1998.

Discussion of recent changes in:

The nature of the plan—The Cash Balance Plan is a relatively new plan, established July 1, 1996. All provisions of the plan were considered when completing the most recent actuarial valuation.

Actuarial assumptions—The following assumptions were used to complete the valuation for this plan.

The economic assumptions for the actuarial valuation as of June 30, 1997, did not impact the unfunded actuarial obligation. The economic assumptions for this plan will have minimal impact under the traditional unit

Consumer Price Inflation	4.50%
Investment Yield	7.00%
Wage Inflation	5.50%
Interest on Participant Accounts	7.00%

Table #5: Economic assumptions

credit cost method or only have significance when participants elect to annuitize the account balance. Under the plan, a participant must have at least \$3,500 in his or her account to elect to annuitize the account balance.

Future service credits are determined by using individual records and projecting future service credits for each member based on that member's actual service credit earned in the prior year.

Retired Members	- Male - Female	1983 GAM-M(-3) 1983 GAM-F(-1)
Active Members	- Male - Female	1983 GAM-M(-5) 1983 GAM-F(-3)
Beneficiaries	- Male - Female	1983 GAM-M(-3) 1983 GAM-F(-1)

Table #6: Mortality assumptions

Male	1983 GAM-M (Minimum 3.5%)
Female	1983 GAM-F (Minimum 2.2%)

Table #7: Termination from disability

Male	
55	6.3%
60	26.1%
65	28.3%
70	100.0%
Female	
55	6.8%
60	19.8%
65	24.6%
70	100.0%

Table #8: Service retirement (sample ages)



AGE	Sample Entry Ages		
	<37	42	47
- Male			
25	0.02%		
30	0.07		
35	0.12		
40	0.13		
45	0.16	0.23%	
50	0.20	0.36	0.49%
55	0.27	0.46	0.80
- Female			
25	0.03%		
30	0.03		
35	0.05		
40	0.09		
45	0.14	0.23%	
50	0.23	0.36	0.40%
55	0.32	0.46	0.60

Table #9: Disability rates(sample ages)

Table #10:
Withdrawal rates
Rates of termination by
sample durations of
membership and sample
entry ages. Assumption is
125% of the rates shown.

Duration	All Males	Sample Entry Ages – Female			
		27	32	37	42
1	14.8%	14.8%	14.8%	14.8%	14.8%
2	8.8	8.8	8.6	7.7	6.6
3	6.8	7.7	6.8	5.4	5.1
4	5.8	6.8	5.8	4.4	4.3
5	5.0	5.9	5.0	3.8	3.6
10	2.5	2.5	2.2	1.9	1.6
15	1.3	1.2	1.2	1.2	
20	0.8	0.9	0.9		
25	0.5	0.8			

Duration	Sample Entry Ages			
	27	32	37	42
- Male				
Under 5	100%	100%	100%	100%
10	60	50	50	45
15	50	45	45	
20	40	40		
25	30			
- Female				
Under 5	100%	100%	100%	100%
10	40	40	40	35
15	35	35	35	
20	30	25		
25	20			

Table #11:
Probability of refund

DURATION	SAMPLE ENTRY AGES			
	27	32	37	42
MALE				
1	8.0%	9.5%	9.8%	8.9%
10	3.6	2.6	1.9	2.0
20	1.1	0.7	0.7	0.4
30	0.7	0.6	0.7	0.4
FEMALE				
1	7.2	7.7	8.5	5.4
10	3.1	2.5	2.7	2.6
20	0.7	0.6	0.9	1.0
30	0.3	0.4	0.5	0.6

Table #12: Promotional salary increases (assumption for salaries due to promotions and longevity, exclusive of the assumed general wage increase)

The demographic assumptions for the actuarial valuation as of June 30, 1997, did not impact the unfunded actuarial obligation. The demographic assumptions for this plan will have minimal impact under the traditional unit credit cost method or only have significance when participants elect to annuitize the account balance. Under the plan, a participant must have at least \$3,500 in his or her account to elect to annuitize the account balance.

Actuarial methods

Actuarial Cost Method

Traditional unit credit

Asset Valuation Method

Equal to the net assets available for benefits

The actuarial methods used for the plan's actuarial valuation as of June 30, 1997, result in an unfunded actuarial accrued Liability of \$557,078. Plan participation and the related asset base has not been sufficient to fund initial and ongoing administrative expenses. This situation is expected to continue into the near future until participation levels increase. (Subsequent to completion of the valuation, legislation has passed that will eliminate the unfunded actuarial accrued liability for this plan.)

STRS contracts for all actuarial services. The current contractor, Watson Wyatt & Company, has been STRS' actuary since October 1, 1997. This firm completed the first actuarial valuation for the Cash Balance Plan as of June 30, 1997.



There are no other specific assumptions that have a material impact on valuation results for this plan.

Date (As of 6/30)	Number	Annual Payroll	Annual Average Pay	% Increase In Average Pay
1996	Plan established July 1, 1996			
1997	1,057	\$4,504,000	\$4,261	na
1998	Information not available for this CAFR			

Table #13: Schedule of active member valuation data

Added to Rolls			Removed from Rolls		Rolls – End of Year			% Increase in Annual Allowances	Average Annual Allowances
Date (as of June 30)	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances			
1996	Plan established July 1, 1996								
1997	0	\$0	0	\$0	0	\$0	na	na	
1998	Information not available for this CAFR								

Table #14: Schedule of retired members and beneficiaries added to and removed from rolls

Aggregate Accrued Liabilities For							
Valuation Date (as of 6-30)	(1) Active Member Contributions On Deposit	(2) Future Benefits to Benefit Recipients	(3) Service Already Rendered by Active Members	Actuarial Value of Assets	(1)	Funding of Liabilities	
						(2)	(3)
1996	Plan established July 1, 1996						
1997	\$164,078	\$0	\$0	\$(393,000)	-240.0%	na	na
1998	Information not available for this CAFR						

Table #15: Solvency test

Analysis of financial experience

Because the current actuarial valuation as of June 30, 1997, is the plan's first actuarial valuation, there was no gain and loss statement provided by the actuary.

Independent actuarial review

Actuarial services for the State Teachers' Retirement System are provided, under contract, by a qualified independent actuarial firm. STRS does not retain an actuary on-staff.

The work performed for STRS by the independent actuarial firm is subject to periodic audit by the Bureau of State Audits. Also, through the competitive acquisition process, the work of a prior actuary will be verified in a subsequent actuarial valuation performed by a new contract actuary. Should the same actuarial firm continue for a period of 10 years, provisions are made for an independent review of that firm's work through an actuarial audit completed by another firm. These audit services are acquired using the competitive acquisition process.

Past actuarial work performed for STRS has been found to be in compliance with actuarial standards of practice and to be of the highest quality.

The actuarial consultant was retained on October 1, 1997 as a result of the competitive acquisition process. The first major task of the new consultant was to complete the plan's first actuarial valuation, which was done as of June 30, 1997.





Cash Balance Plan

Summary Provisions

Description of Plan

The Cash Balance Plan is a defined benefit plan that meets the requirements of the Internal Revenue Code. It is optional to school districts, community college districts or county offices of education as an alternative retirement plan. The CB Plan is a primary retirement program for employees of California's public schools who are hired to perform creditable service for less than 50 percent of the full-time equivalent for the position.

Plan Eligibility Requirements

Employers may offer the plan to eligible employees. Employers must elect through formal school board action, exclusively, or in addition to other alternative plans, and/or Social Security.

When an employer first elects to offer the plan, employees employed to perform creditable service, and whose basis of employment (employee's formal contract) is less than 50 percent of the FTE for the position, become participants on the later of: (1) the first day in which creditable service is performed or (2) the effective date of the employer's governing board's action to provide the CB Plan.

Elections

Employees have the right to elect coverage under either Social Security or an alternative plan in lieu of the CB Plan if the employer's governing board's action provides for these options.

An election to participate in either Social Security or an alternative plan does not prevent an employee from electing to participate in the CB Plan at a later date, as long as the CB Plan is provided by the employer and the employee is eligible to participate in the plan.

Discontinued eligibility

Employees shall cease contributing to the CB Plan and become mandatory members of the STRS Defined Benefit Plan when the basis of employment (formal contract) changes to 50 percent or more of full-time for the position, OR upon election to the STRS DB Plan, which may occur at any time.

Contributions

Each employer contributes a minimum of 4 percent of salary on behalf of each participating employee. Through the collective bargaining process, employers are permitted to pay different levels of employee and employer contributions, as long as the following conditions are met:

- 1) The sum of the employee and employer contributions equals or exceeds 8 percent of employee salary.
- 2) The employee and employer contribution rates are the same for each participant employed by the employer.
- 3) The contribution rates as determined under the collective bargaining agreement become effective on the first day of the plan year and remain in effect for at least one plan year.

Vesting

A participant has an immediate vested right to a retirement benefit equal to the sum of the balance of contributions, including any compounded interest earned on his or her employee and employer accounts.

Guaranteed Interest Rate

The CB Plan has a guaranteed interest rate that is determined annually by the Teachers' Retirement Board. The rate is based on the average of thirty-year U.S. Treasury notes for the 12 months immediately preceding the plan year (May–April).

Plan Investments

The CB Plan is a separate benefit structure within STRS. CB Plan contributions are invested at the direction of the board in internally pooled portfolios of the Teachers' Retirement Fund. The plan has ownership of units of these pooled portfolios, which reflect market fluctuations of underlying securities on a daily basis. Units are purchased using the current market value per unit. Unitized funds are accounted for on a multiple class level, which entails the sharing of one portfolio by two or more owners. Income and portfolio level expenses are distributed to each class level on a pro rata basis determined by the amount of units owned as a percentage of the total units of the portfolio.

Gain and Loss Reserve

Funds accumulate in a gain and loss reserve to credit interest to participants' employee and employer accounts during years when the rate of return on investments is less than the guaranteed interest rate. Annual additions to the reserve are determined by the board on earnings in excess of those needed to credit the guaranteed interest rate and pay administrative costs. The gain and loss reserve will also be used to ensure adequate funds are available in the annuitant reserve for monthly annuity payments.

Additional Earnings Credit

After the end of the plan year, when the total investment earnings for the immediately preceding plan year are known, the board may declare an additional earnings credit. Any additional earnings credit will be applied to participants' employee and employer accounts.

Retirement Eligibility

Normal retirement age is 60, but no earlier than age 55 years. A participant must terminate all creditable service in the CB Plan and apply for a retirement benefit.

Distribution of a retirement benefit must begin by age 70 1/2, unless still working.

Early Withdrawals

Both federal and California state tax codes provide for tax penalties for certain early withdrawals. A 20 percent federal and 6 percent state tax penalty may be assessed for early withdrawals.

Rollover

Participants may be permitted to transfer funds from eligible retirement plans into the CB Plan, as long as the transfers are allowable under applicable federal and state laws.

Retirement Benefit

Normal retirement benefit is a lump-sum benefit equal to the balance of credits in participant's employee and employer accounts. All the lump-sum payment may be eligible to roll over into an IRA, defined contribution plan or other eligible retirement plan that accepts such a rollover.

or

Participant may choose one of the following five annuities, if participant's balance is \$3,500 or more: a single life annuity with a cash refund feature, a single life annuity without a cash refund feature, a 100 percent joint and survivor annuity, a 50 percent joint and survivor annuity, and a period-certain annuity.

Reinstatement from Retirement

If a participant reinstates subsequent to commencing a monthly annuity:

- within one year and prior to age 60. All annuities must be terminated and a credit balance will be applied to the participant's account. The participant must reapply for subsequent retirement.



- after one year and age 60 or older. Continue any annuity and credit new contributions to a new participant's account. The participant would apply for subsequent retirement on the basis of the new account.

Disability Eligibility

A participant may apply for disability at any time. All creditable service subject to coverage by the CB Plan must be terminated prior to the disability date. A disability benefit will become payable only upon determination by the board that the participant has a total and permanent disability.

Disability Benefit

Normal distribution is a lump-sum benefit. The benefit amount is equal to the balance of contributions, interest and additional credits in participant's employee and employer accounts. There is also an annuity available in the same five retirement benefit options as long as participant's account balance is \$3,500 or more.

Death Benefit

Death of Participant Prior to Retirement

Normal distribution is a lump-sum benefit. The sum of the balance of credits of the participant's employee and employer accounts is payable to the named beneficiary. If no valid beneficiary is designated, the lump-sum payment will be paid to the participant's estate.

Surviving Spouse

If a participant's surviving spouse is the only beneficiary to whom a death benefit is payable, the spouse may elect to receive the benefit in the form of an annuity, provided the sum of the balance of credits to the participant's employee and employer accounts equals or exceeds \$3,500. The surviving spouse may elect either a single life annuity without a cash refund feature or a period certain annuity.

Death of Participant Receiving Annuity

Benefit payable in accordance with form of annuity elected by participant.

Termination Benefit (Refunds)

Upon termination of all creditable service subject to coverage by the plan, for any reason other than death, disability or retirement, a participant may apply for a lump-sum termination benefit. The benefit amount is equal to the sum of the employee and employer accounts, plus compounded interest as of the date the benefit is paid.

Five-Year Rule

A participant may not apply for a termination benefit if less than five years has elapsed following the date the most recent termination benefit was distributed to the participant.

Waiting Period

The termination benefit is payable after one year has elapsed following the date of termination of employment. The application for the termination benefit will be automatically canceled if the participant performs creditable service within one year following the date of termination of employment.

Changes in Plan Provisions

There have been no plan amendments that would impact an actuarial valuation of STRS since the last annual financial report was issued. All plan provisions were considered in the completion of the June 30, 1997 actuarial valuation.

Summary Definitions

Additional Earnings Credit

A percentage determined by the board for a plan year by means of a plan amendment and credited to employee and employer accounts on a specified date.

Annuitant Reserve

Reserve account established by the board within the STRS Cash Balance Fund for the payment of monthly annuities.

Beneficiary

Any person(s) or entity designated by the participant or otherwise entitled by law to receive the death benefit under the plan.

Creditable Service

Specific activities performed for an employer in a position requiring a credential, certificate, or permit, or under the appropriate minimum standards adopted by the Board of Governors of the California Community Colleges, or under the provisions of an approved charter for the operation of a charter school for which the employer is eligible to receive state apportionment.

Death Benefit

Benefit payable under the plan upon the death of the participant.

Defined Benefit Plan

State Teachers' Retirement System Defined Benefit Plan as set forth in Part 13 (commencing with Section 22000) of the Education Code.

Disability Benefit

Benefit for permanent and total disability, that is an amount equal to the sum of the participant's employee and employer accounts as of the disability date.

Disability Date

Date the benefit becomes payable to a participant who has been approved for a disability benefit from the plan.

Employee Account

The nominal account of the participant to which employee contributions and interest and any additional earnings credits are credited under the plan.

Employee Contribution Rate

Percentage of the participant's salary withheld by the employer as an employee contribution.

Employee Contribution

Amount withheld from the participant's salary by the employer.

Employer Account

Nominal account of the participant in which employer contributions on behalf of the participant and interest and any additional earnings credits are credited.

Employer

School district, community college district or county office of education that has elected to provide the benefits of the plan to persons employed to perform creditable service. Employer does not include the state.

Employer Contribution Rate

Percentage of salary the employer contributes to the plan with respect to each employee who is a participant of the plan.

Employer Contribution

Amount contributed by the employer to the plan for each employee who is a participant.

**Full-Time Equivalent**

The time a person who is employed on a part-time basis would be required to serve in a school year if he or she was employed full time in that position, as defined by Education Code Section 22138.5.

Participant

Person who has performed creditable service subject to coverage under the CB Plan and who has contributions credited under the plan or is receiving an annuity under the plan by reason of creditable service.

Plan Year

Period commencing on July 1 and ending on June 30 in the following year.

Reinstatement

Reemployment with an employer in which creditable service subject to coverage by the plan had previously been terminated and a lump-sum distribution or annuity had been paid.

Retirement Benefit

An amount equal to the sum of the participant's employee and employer accounts as of the retirement date.

Retirement Date

Date the benefit becomes payable to a participant who has applied for a retirement benefit from the CB Plan.

Salary

Remuneration in cash for creditable service by an employer to a participant. Salary does not include fringe benefits, job-related expenses, money paid for unused accumulated leave, compensatory damages, severance pay, annuity contracts, tax-deferred retirement programs, or other insurance programs.

Termination Benefit

An amount equal to the sum of the participant's employee and employer accounts payable under the provisions of the CB Plan upon termination of all creditable service.

Total and Permanent Disability

Any medically determinable physical or mental incapacity that is expected to prevent the participant from performing creditable service for the employer for a continuous period of at least one year.